LSST DC3b PT 1.2 3000 run

We expect to carry out a third ("3000") processing run in July 2011; I'd like to start the machines running by the 8th.

This page is intended to help us decide what to include. Some of this is already done on trunk or a branch, but I'd like a list of everything that we want that is not in level 2000. Please sign your contributions; this is not a commitment to implement them. The basic idea is to get a stack that reflects where we are (or nearly are) as of 2011-07-01.

As I have the enviable task of shepherding this data, we need to have a way to test each adopted feature. Ideally this would mean a pipeQA plot, but in some cases all I need is the test that shows that we really did implement the feature (e.g. the Chebyshev changes).

Desired Features

Chebyshev interpolation (RHL)
> For PSF interpolation (using the RHL pcaPsf for now). Test: confirm that high-order polynomials make sense.

A star/galaxy number (RHL)
> Probably based on the instFlux (==gaussianFlux) or the modelFlux from UCDavis. Test: use the numbers in pipeQA

Proper flat fields (RHL)
> There is evidence of problems in the corners of the array. Test: look at pipeQA's (psf - cat) plots

Proper propagation of measurement masks
> From measurement to Source; no need to handle proper assigment of bits to different algorithms (i.e. a single global enum is OK for now). Test: look at the output bits

Diffim for snap pairs (ACB)
> This needs to be implemented as a pipeline of some sort; possibly using a single pipette-based stage + two I/O stages. Test: ???

aperture corrections for model fluxes (RHL)
> The modelFlux for a point source must equal the PSF flux. N.b. this requires that the same aperture correction be applied as for the psfFlux. Test: the pipeQA (psf - model) plots have a nice stellar locus

cleanup aperture correction application code (RHL)
> The current code (in the stage) is specific to psf mags + cut-and-paste copies [mea culpa]. Test: Look at the code; also needed to support the previous item

Look at background level bias (RHL)
> I think that there's evidence for a bias at the two DN level. Test: Look at pipeQA's (psf - ap) for larger apertures.

Things that should not be included

Cleanup of Policy (RHL)

Replacement of sets of stages with pipette mega-stages (RHL)

The Angle changes (RHL)
>They are ready-to-merge, but let's hold off until post 3000